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## **Research**

### **Short Communication**

#### **Owners' perception of veterinary medical emergencies**

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#### **Summary**

Telephone triage is an effective way for medical emergency teams to organise and prepare for incoming cases in human and veterinary medicine. In human medicine many calls are not emergencies, no equivalent research exists for veterinary out-of-hours services. Retrospective call records (n=1000) from one emergency out-of-hours practice were reviewed. Species affected and reason for the emergency call were noted and then subdivided into eight categories based on veterinary literature. Thematic analysis identified emergent themes in the call records why clients had contacted the practice. Most calls related to canine patients (67%), 27% were feline cases and 3% related to rabbits. Fifty-five percent of out-of-hours calls were classified as non-emergencies; 45% were emergencies, with the majority of these calls concerning category 2: haemorrhage and open wounds, or category 4: systemic shock, collapse or dystocia cases. For dogs, 67% of calls were non-emergencies compared to 56% in cats and 49% in rabbits. Vomiting (9%), breathing difficulties (6%) and lethargy (6%) were the most common reasons for contacting the out-of-hours service. A large percentage (33-67% depending on species) of pet owners could not accurately recognise veterinary emergencies within their pets. This figure is much higher than trends observed in human emergency medicine.

## Introduction

Veterinary practices in the UK are required to provide their clients with access to veterinary care outside of their normal working hours: an *out-of-hours* service. Telephone triage is an effective way for medical emergency teams to organise and prepare for incoming out-of-hours or emergency cases in human and veterinary medicine (Barber and others, 2000). Trained telephone personnel are responsible for extracting as much information about the nature of the emergency as possible to allow the human / veterinary team to be able to deal with the case as effectively as possible once the emergency arrives at the place of treatment (Ruys and others, 2012; Cone and Murray, 2002). To some extent, this system relies on members of the public recognising what an emergency is and identifying when the right time to contact the appropriate veterinary service is. Trends exist within human medicine, for patients to contact ambulance services, phone NHS medical helplines or to attend hospital Accident and Emergency departments when their condition is a non-emergency, purported to be due to a lack of compliance with previous medical advice or an over-estimation of the severity of their condition (Turner and others, 2015). No equivalent research exists for veterinary out-of-hours services, therefore this study aimed to evaluate if veterinary clientele could differentiate between emergencies and non-emergencies, to discover if a similar situation to that observed in human medicine exists within the veterinary industry.

## Method

Retrospective call and subsequent case records (n=1000) from one small animal emergency out-of-hours practice in the West Midlands, offering a dedicated emergency service for 29 veterinary practices from 18.30 to 08.30 hours, weekdays and a 24-hour emergency service during weekends, were reviewed from January 2014 to March 2014. All cases attended an emergency appointment, those that did not were excluded from the study. Animals' species and breed, and the reason for the out-of-hours call were noted and cases were divided into emergencies and non-emergencies based on findings at the emergency appointment. Case notes containing insufficient detail to determine the initial reason cited for attending an emergency appointment were excluded from analysis. An emergency was defined as a case where without immediate or timely intervention, lasting damage or death of the patient may occur (Matthews, 2006). Emergencies were then subdivided into eight categories (1-8) based on veterinary literature (Matthews, 2006) by the author (D. Jones) in consultation with an experienced veterinary surgeon from the practice and where possible the treating veterinary surgeon. Examples of the type of condition which would reside in each category include: 1: dyspnoea and choking, 2: haemorrhage and open wounds, 3: poisoning, 4: systemic shock, collapse and dystocia, 5: seizures, 6: blunt trauma, fractures, burns and dislocations, 7: ocular injuries and 8: non-emergencies. The relative frequency of emergency versus non-emergency calls across all species and within defined species groups (cats, dogs, rabbits, small mammals excluding rabbits, and birds) was analysed using Microsoft Excel Version 2010. Thematic analysis (as described by Braun and Clarke, 2006) identified factors which appeared in the call records which led a client to initially contact the veterinary practice to propose emergent clinical themes which led clients to seek out-of-hours care for their pets.

## Results

Four hundred and fifty emergency calls across all categories were reported: 1: 4%, 2: 14%, 3: 5%, 4: 10%, 5: 4%, 6: 4%, 7: 4%, representing 45% of total calls, whilst the remaining calls (55%, n=550) were non-emergencies (Figure 1). The majority of calls made related to canine patients (67%), 27% were feline cases and 3% related to rabbits. Within canine patients, 67% of calls were categorised as non-emergencies compared to 56% in cats and 49% in rabbits. Limited calls received related to small mammals (n=23; 61% non-emergencies) or birds (n=6; 33% non-emergencies).

**Thematic** analysis exposed nine key themes why clients had contacted the out-of-hours service: vomiting, respiratory difficulties, lethargy, not eating or drinking, diarrhoea, bleeding, lame, restless and *not themselves* (Figure 2).

## Discussion and conclusions

A large percentage (33-67%) of the small animal pet owners surveyed could not accurately recognise veterinary emergencies within their pets. Although it should be noted that the results can only reflect client behaviour for the practice surveyed, we believe this trend would be repeated across the veterinary sector for small animal practices, in alignment with behaviour observed in human emergency medicine. We postulate that similar patterns would not occur in large animal (farm and equine) practice due to an increased knowledge of animal health and management in owners or within peers (e.g. livery yard owners), economic constraints associated with livestock production and the reduction in direct contact with animals which could highlight emergencies.

In the UK, both routine and emergency healthcare are provided free of charge via the National Health Service (NHS). However, the majority of veterinary practices charge for their services, and a veterinary emergency consultation is usually more expensive than a consultation within normal working hours (Pratt, 2016). Human medical research has suggested that people use accident and emergency services for the convenience of seeing medical staff at the time of their choosing (van Uden, 2003; Shipman and others, 1997). A similar rationale may be occurring within pet owners, especially given the time demands associated with modern living and the emotional investment people have in their pets (Baker and others, 2016). The insurance status of pets was not noted in the current study and could also influence client behaviour, as owners may elect to call an out-of-hours service for convenience believing additional costs will be covered by insurance. However non-insured owners may avoid using an emergency service due to anxiety about veterinary costs.

Another possible explanation for high percentage of non-emergency calls reported could be that pet owners are unsure whether their pet's condition is an emergency or not, turning to the emergency out-of-hours service for reassurance. The NHS implemented an emergency guidance phone service 'NHS 111' in 2012 to offer a forum where concerned patients could seek telephone advice when they felt their illness was not a life threatening emergency requiring a '999' immediate attention call. The results suggest scope may exist for an equivalent service within the veterinary sector.

Client education may be another solution to reduce the high percentage of non-emergency calls. Limited formal opportunities exist to the modern pet owner to engage in animal first aid education or qualifications; education could help develop their knowledge regarding emergency classification. Veterinary practices could lead the way in client education and offer guidance on what conditions require emergency treatment. Such investment would demonstrate the practices emotional investment in their clients and their pets, which should strengthen client loyalty bonds. Further research exploring why clients elect to contact out-of-hours services for non-emergencies and do not engage with traditional working hours appointments is warranted. There would also be worth in repeating the study across a range of veterinary emergency clinics to ascertain if the trends observed here are indicative of the entire veterinary sector.

### **Acknowledgements**

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### **Conflict of Interest**

No conflicts of interest existed in this work.

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## Figure Legends

Figure 1: Percentage distribution of out-of-hours calls for canine patients

Figure 2: Emergent themes why clients contact the out-of-hours service

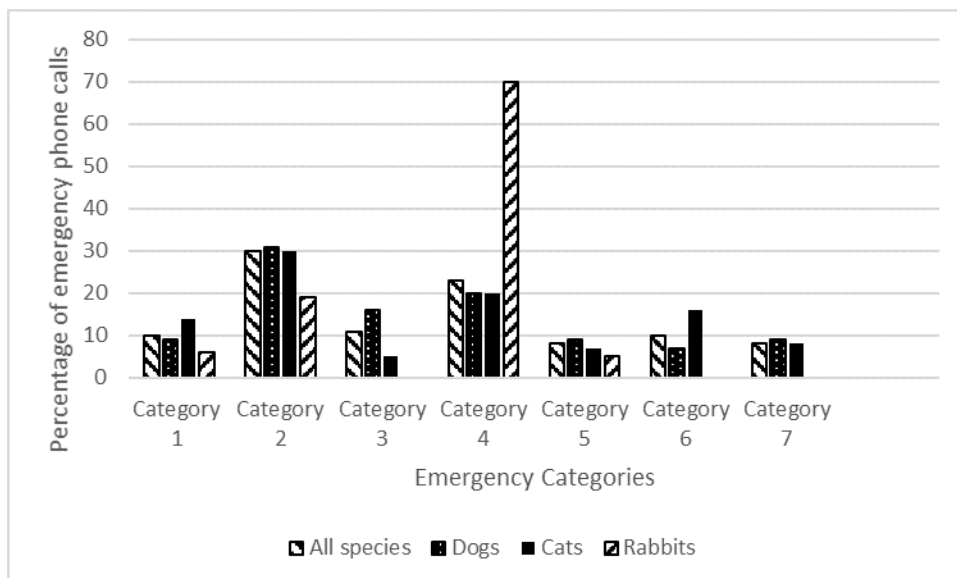


Figure 1

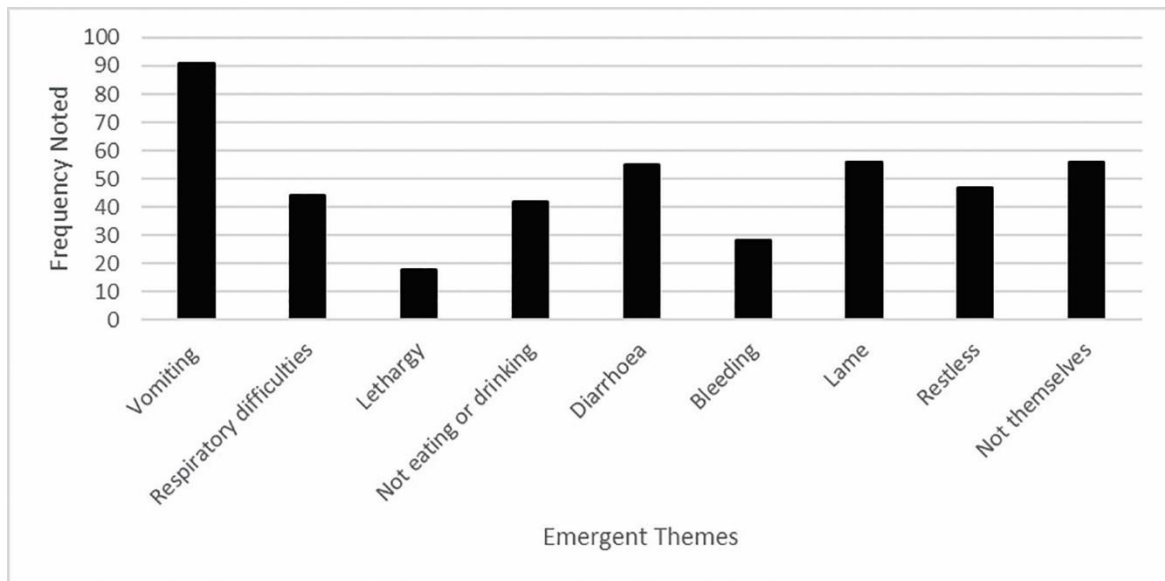


Figure 2